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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,111

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Johan Dahlberg

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WASHINGTON, DC 20006

EXAMINER

TROY, DANIEL J

ART UNIT

PAPER NUMBER

3641

MAIL DATE

DELIVERY MODE

11/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,111	DAHLBERG, JOHAN	
	Examiner	Art Unit	
	DANIEL J. TROY	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/2/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/24/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

1. DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-6 and 14-21 in the reply filed on 9/2/2009 is acknowledged.
2. Claims 7-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/2/2009.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 4. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-6 and 14-21 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The applicant claims a method for producing tubular propellant charges; however the claims are directed toward a method of combustion rather than the steps taken to form the charges.
6. Regarding claim 21, it is unclear how claim is a step for producing a tubular propellant charge.
7. Claims 1-6 and 14-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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8. Regarding claim 1, it is unclear what defines the "e-dimension distance" thus rendering the claim indefinite. From where to where is the distance measured? Is it defined in the drawings?

9. Regarding claims 4, 5, and 14-18, the statement "intended to be..." make it unclear if the following limitations are required or merely suggested as an intended use.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

11. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-6 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxim (US 694,295) in view of Hafstrand (US 2005/0066835).

13. Regarding claim 1, Maxim discloses, a method for producing tubular propellant charges with a very high charge density and high progressivity (line 47), characterized in that the charge comprises at least two propellant tubes (figure 2 or 3) which have circular outer and inner boundary surfaces and which are radially perforated in their entirety with combustion or ignition channels (3) at an e-dimension distance selected in relation to the actual type of propellant and its desired combustion characteristics ("to provide for suitable burning thicknesses between the perforations to secure the simultaneous completion of the combustion throughout the mass of the explosive" lines 37-42) and the ignition of the propellant tubes is successively done one after the other

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(figure 8 discloses a structure where it is inherent that the tubes ignite one after the other) , but lacks at least one of the total number of outer surfaces of these propellant tubes that are available for initiation has been treated with an inhibition, surface treatment or surface coating. It is inherent that the combustion of the layer would at least partially overlap to some degree; along the entire length of the propellant layer one portion will complete its combustion before other areas (the time difference may be extremely small), therefore the next layer would begin burning while the other areas of the first layer are finishing up (partially mutually overlapping).

14. Hafstrand teaches that it is known in the art to treat propellant surface with an inhibitor ([0009]). The use of an inhibitor allows for further control of the progressivity.

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Maxim, by using an inhibitor similar to that disclosed by Hafstrand, to allow for further control of the progressivity. The examiner notes that the last sentence of paragraph [0004] of Hafstrand states "The progressivity of the powder can then in turn be accentuated by surface treatment with suitable substances" therefore it is inherent that a "surface treatment" would include all outer surfaces. Additionally it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the maximum pressure very close to the maximum operational pressure, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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16. Regarding claim 2, Maxim discloses, at least two of the perforated propellant tubes included in the charge have been arranged one after the other (figure 2 or 3).

17. Regarding claim 3, Maxim discloses, the propellant tubes included in the charge, at least one is arranged inside the internal cavity of an outer propellant tube.

18. Regarding claims 4, 14, and 15, for the structure shown in figure 8 of Maxim it is inherent that the ignition would propagate outwardly one after another. Further Hafstrand discloses “burn time” ([0003]).

19. Regarding claims 5 and 16-18, Hafstrand discloses “powered will burn towards other primed surfaces during a successive increase of the burn area, and the gas release thereby also increases.”

20. Regarding claims 6, 19, and 20, Maxim in view of Hafstrand discloses the invention as explained above further noting that it is inherent for an inhibited substance to have a different rate of combustion.

21. Regarding claim 21, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the propellant gas generation ceased before the projectile leaves the muzzle, since it would mean the optimal amount of propellant is being used for that weapon and it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL J. TROY whose telephone number is (571)270-3742. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (571) 272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DJT/

/James S. Bergin/
Primary Examiner, Art Unit 3641